# Complete Summary

## GUIDELINE TITLE

American Gastroenterological Association medical position statement: epidemiology, diagnosis, and treatment of pancreatic ductal adenocarcinoma.

## BIBLIOGRAPHIC SOURCE(S)

American Gastroenterological Association medical position statement: epidemiology, diagnosis, and treatment of pancreatic ductal adenocarcinoma. Gastroenterology 1999 Dec;117(6):1463-4. [2 references]

## COMPLETE SUMMARY CONTENT



## SCOPE

### DISEASE/CONDITION(S)

Pancreatic ductal adenocarcinoma

### GUIDELINE CATEGORY

Diagnosis
Management
Risk Assessment
Screening
Treatment

### CLINICAL SPECIALTY

Family Practice
Gastroenterology
Internal Medicine
Oncology
Radiation Oncology
Surgery

## INTENDED USERS

Physicians

## GUIDELINE OBJECTIVE(S)

To discuss the epidemiology, diagnosis, and medical (chemotherapy and radiation therapy) and surgical treatment of pancreatic adenocarcinoma

## TARGET POPULATION

### Screening

- Individuals at-risk for pancreatic cancer, including those with a family history of pancreatic cancer in a first-degree relative or hereditary pancreatitis, family members and patients with familial adenomatous polyposis (FAP), patients and some family members with familial atypical multiple mole melanoma (FAMMM) syndrome, patients with intraductal papillary mucinous tumor (IPMT), and patients with diabetes mellitus

### Diagnosis

- Patients with suspicion of pancreatic cancer because of symptoms of pain, jaundice, anorexia, early satiety, or weight loss

### Treatment

- Patients with pancreatic ductal adenocarcinoma

## INTERVENTIONS AND PRACTICES CONSIDERED

### Diagnosis

1. Serum CA 19-9
2. Conventional or single-phase spiral computerized tomography (CT)
3. Dual-phase spiral computerized tomography (CT)
4. Endoscopic ultrasonography
5. Laparoscopy

### Treatment

1. Standard Whipple resection
2. Pylorus-preserving Whipple resection
3. Endoscopic placement of expandable metal stent
4. Surgical or laparoscopic gastric bypass
5. Surgical relief of bile duct obstruction
6. Pain control with chemical intraoperative splanchnicectomy, percutaneous celiac block, or opioid analgesics
7. Administration of 10% of the normal postprandial output of lipolytic activity
8. Adjuvant therapy with 5-fluorouracil-based or gemcitabine chemotherapy
9. Neoadjuvant chemoradiation

### MAJOR OUTCOMES CONSIDERED

- Sensitivity, specificity, and positive predictive value of diagnostic tests
- Risk for pancreatic ductal adenocarcinoma
- Surgical mortality rates
- Long-term and short-term survival
- Results of palliative treatment (e.g., relief of jaundice)

## METHODOLOGY

### METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The authors included only studies published after 1980. A literature search was initiated using MEDLINE and the medical subject terms pancreatic cancer with the cross-references epidemiology, diagnosis, chemotherapy, radiotherapy, and surgery. Secondary searches were also performed for each major category.

For epidemiology, secondary searches were undertaken using pancreatic cancer. To ascertain the national incidence of pancreatic cancer in the United States, the authors used cancer statistics from the National Cancer Institute. To determine rates in a typical community in middle America, the authors referred to a population-based study. Only cohort or case-control studies were used to obtain information regarding risk for pancreatic cancer in certain populations (chronic pancreatitis, hereditary pancreatitis, diabetes mellitus) and for information regarding environmental risks (smoking, diet, and occupation).

To find relevant articles about the diagnosis of pancreatic cancer, secondary searches were conducted for each of the tests the authors discuss (computerized tomography [CT], ultrasonography [US], endoscopic ultrasonography [EUS], tumor markers, etc).

### NUMBER OF SOURCE DOCUMENTS

Not stated

### METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Subjective Review

### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

### METHODS USED TO ANALYZE THE EVIDENCE

Review

### DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

### METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

### RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

### COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

### METHOD OF GUIDELINE VALIDATION

Peer Review

### DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

This document was approved by the Clinical Practice and Practice Economics Committee in March 1999, and by the American Gastroenterological Association Governing Board in May 1999.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

#### Environmental Exposures

No definite recommendations can be given.

Environmental data suggest that the risk of pancreatic cancer can be reduced by cessation of or abstention from cigarette smoking and ingestion of less meat and fish and more vegetables.

#### Screening Tests for Persons at Risk

Screening should be initiated 10 years before the age at which pancreatic cancer has been first diagnosed in families with syndromes and after age 35 in hereditary pancreatitis.

No screening strategy has been shown to detect early pancreatic cancers in patients with an increased risk for developing pancreatic cancer, and no specific

method can be recommended. At present perhaps the best strategy is to offer spiral computerized tomography (CT), followed by endoscopic ultrasonography (EUS) if computerized tomography results are nondiagnostic and measurement of serum CA 19-9. However, this strategy may not detect curable ''early lesions''.

## Tests to Diagnose and Stage Pancreatic Cancer

Currently, conventional or single-phase spiral computerized tomography is the initial test to diagnose pancreatic tumors. However, it is likely that dual-phase spiral computerized tomography will be found to be the best test to diagnose and stage pancreatic tumors and become the standard. Endoscopic ultrasonography is best used to search for small resectable tumors not seen by computerized tomography. The bias is toward interpretation of imaging test results as indicating resectable tumors because an aggressive surgical approach is safe in experienced hands.

Laparoscopy is indicated if there is a high likelihood of unresectability that has not been confirmed by imaging tests. Examples include computerized tomography evidence of liver or other metastases not proven by fine-needle aspiration, pancreatic body or tail cancers, and ascites.

## Surgery

Patients with resectable tumors should be referred to centers with experienced pancreatic surgeons to undergo exploration.

Standard Whipple and pylorus-preserving Whipple resections are performed interchangeably; the standard Whipple resection is used for larger, more extensive tumors.

If resection of the primary tumor is not possible, the surgeon must decide if surgical palliative procedures are needed to relieve biliary or duodenal obstruction.

## Palliation

Patients requiring relief of bile duct obstruction who are not candidates for possible curative resection should undergo endoscopic placement of an expandable metal stent.

To relieve obstruction of the duodenum by tumor (usually a late development), a surgical or laparoscopic gastric bypass procedure is recommended. Use of endoscopically placed expandable metallic prostheses requires further evaluation.

Pain should be controlled by chemical intraoperative splanchnicectomy, percutaneous celiac block, or use of appropriate long-acting opioid analgesics. Splanchnicectomy and blocks avoid the adverse effects associated with opioids.

Exocrine pancreatic insufficiency should be treated with a dose of 10% of the normal postprandial output of lipolytic activity (30,000 IU or 90,000 USP units)

with meals by giving one third of the dose after a few bites of the meal, one third during the meal, and one third at the end of the meal.

### Chemotherapy or Radiation Therapy

Adjuvant therapy with a 5-fluorouracil–based chemoradiation regimen should be considered after surgical resection.

Neoadjuvant chemoradiation is an acceptable alternative to postoperative chemoradiation. Before neoadjuvant therapy, contrast helical computerized tomography should be performed to carefully stage the tumor. In addition, laparoscopy can be used to further exclude occult visceral and peritoneal metastases.

Patients with unresectable locoregional or metastatic disease should be considered candidates for investigational trials if they have good performance status (able to carry out normal activities).

In lieu of an investigational study, standard treatment for patients with unresectable locoregional disease is radiation and concomitant 5-fluorouracil or gemcitabine alone.

Gemcitabine is an option for treatment of all patients with poor performance status and/or pain or for management of metastatic disease.

### CLINICAL ALGORITHM(S)

None provided

## EVIDENCE SUPPORTING THE RECOMMENDATIONS

### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

With rare exceptions, the authors considered only peer-reviewed articles of prospective studies for diagnosis of pancreatic ductal adenocarcinoma.

All but five of the articles chosen for the surgical section were published in 1990 or later. The discussion of the nonsurgical management of pancreatic adenocarcinoma focuses primarily on randomized trials in chemotherapy or radiotherapy that meet the criteria of a randomized trial design with treatment arms balanced for important characteristics such as performance status and extent of disease. As a rule, the authors included only studies conducted by cooperative groups involving multiple institutions or by an institution with a large patient population.

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

Diagnosis

Identification of patients who are at risk for developing pancreatic cancer and detection of disease at an early curable stage may improve survival.

### POTENTIAL HARMS

The standard Whipple resection is associated with weight loss and nutritional disturbances. Similar weight loss and nutritional deficiencies have also been observed with pylorus-preserving Whipple resection. Surgical mortality rates for the Whipple resection are $\leq$2% in major centers around the world.

There are side effects associated with 5-fluorouracil and gemcitabine and radiation therapy.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

End of Life Care
Living with Illness

### IOM DOMAIN

Effectiveness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

American Gastroenterological Association medical position statement: epidemiology, diagnosis, and treatment of pancreatic ductal adenocarcinoma. Gastroenterology 1999 Dec;117(6):1463-4. [2 references]

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

1999 May (reviewed 2001)

### GUIDELINE DEVELOPER(S)

American Gastroenterological Association - Medical Specialty Society

## SOURCE(S) OF FUNDING

American Gastroenterological Association

## GUIDELINE COMMITTEE

American Gastroenterological Association Clinical Practice and Practice Economics Committee

## COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

## FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

## ENDORSER(S)

American College of Gastroenterology - Medical Specialty Society

## GUIDELINE STATUS

This is the current release of the guideline.

An update is not in progress at this time.

According to the guideline developer, the Clinical Practice Committee meets 3 times a year to review all American Gastroenterological Association guidelines. This review includes new literature searches of electronic databases followed by expert committee review of new evidence that has emerged since the original publication date.

This guideline has been reviewed by the developer and is still considered to be current as of Dec 2001.

## GUIDELINE AVAILABILITY

Electronic copies: Available from the American Gastroenterological Association (AGA) Gastroenterology journal Web site.

Print copies: Available from American Gastroenterological Association, 4930 Del Ray Avenue, Bethesda, MD 20814.

## AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- DiMagno EP, Reber HA, Tempero MA. AGA technical review on the epidemiology, diagnosis, and treatment of pancreatic ductal adenocarcinoma. Gastroenterology. 1999 Dec;117(6):1464-84. [195 references].

Electronic copies: Available from the American Gastroenterological Association (AGA) Gastroenterology journal Web site.

Print copies: Available from American Gastroenterological Association, 4930 Del Ray Avenue, Bethesda, MD 20814.

## PATIENT RESOURCES

None available

## NGC STATUS

This summary was completed by ECRI on June 5, 2002. The information was verified by the guideline developer on July 12, 2002.

## COPYRIGHT STATEMENT



Date Modified: 4/12/2004